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Evaluating Health-System Responsiveness and Structural Predictors of Childhood Immunization Defaulting Among Nursing Mothers in Ila Local Government Area, Osun State, Nigeria

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Abstract:

Background. Nurses constitute the backbone of healthcare delivery, yet persistent nurse shortages have compelled many hospitals in low-resource settings to adopt the bi-shift (12-hour) duty system. Although the arrangement is intended to optimize scarce staffing, its implications for nurses' perceptions, attitudes, and quality of life remain insufficiently characterized in the Nigerian context. This study assessed the perception and attitude of nurses toward the bi-shift system and its perceived effect on their quality of life in a selected hospital in Abeokuta, Ogun State.

Methods. A quantitative descriptive cross-sectional design was adopted at Sacred Heart Hospital, Lantoro, Abeokuta. The Taro Yamane formula was applied to a population of 185 nurses to derive a sample of 139 respondents, recruited by simple random sampling. A 39-item self-structured questionnaire measured socio-demographic characteristics, perception, attitude, and quality-of-life indicators on a five-point Likert scale; content validity was established through expert review and reliability through pilot testing (Cronbach's $\alpha \geq 0.70$). Data were analyzed in SPSS version 27.0 using descriptive statistics, the chi-square test, and Pearson's correlation, with statistical significance set at $p < 0.05$.

Results. Of the 139 nurses surveyed (response rate 100%), 66.9% reported a negative perception of the bi-shift system and 51.8% demonstrated a negative attitude. Half of the respondents (50.4%) reported a high perceived effect of bi-shift on their quality of life, citing inadequate rest,

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physical exhaustion, disruption of social life, and reduced motivation. A statistically significant association was found between years of nursing experience and perception of bi-shift (χ^2 = 17.685, df = 2, $p < 0.001$), and a significant positive correlation between perception and attitude (r = 0.617, $p < 0.001$).

Conclusion. Most nurses expressed negative perceptions and attitudes toward the bi-shift system and linked it to a reduced quality of life and increased work-related strain. A review of staffing policies and scheduling patterns, alongside structured wellness support, is recommended to protect nurse well-being and sustain quality patient care.

Keywords: Perception, Attitude, Nurses, Bi-shift, Twelve-hour shift, Quality of life, Shift work,

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Introduction

Nurses are vital to the provision of health services and often referred to as the backbone of any emergency response, health promotion and disease-prevention programme (World Health Organization [WHO], 2025). Nursing is seen as a challenging job in many respects, due to the fact that they work in various places, such as hospitals, clinics, schools, community health centres and home care—where they experience physical and emotional stress (Babapour et al., 2022; Brino, 2023). Nursing is a universally recognized profession that is constantly under stress, as seen in heavy workloads, long working hours, stressful surroundings and the need to continuously care for patients (Rony et al., 2024).

The profession represents about 60% of the total health workforce in the world, which is estimated to be about 29 million nurses globally (World Health Organization, 2024; Tanaka & Miyamoto, 2022). There is a critical shortage in many countries including Nigeria where the ratio of nurses to patients is approximately 1:1,160 as against the recommended ratio by WHO of 2.5 health workers per 1000 population (Oreh, 2023). The scarcity creates high demand for staff, and helps to account for the fact that many health institutions in Nigeria have switched to a bi-shift (12-hour duty schedule), thus using the available staff efficiently (Dall'Ora et al., 2022).

Due to chronic nursing shortage, bi-shift systems have become common in healthcare organizations. Across the globe, the percentage of practitioners employed to work 12-hour shifts increased from 31% in 2005 to 52% in 2009, and a number of studies have estimated that between 65% and 80% of nurses regularly work 12-hour shifts (Dall'Ora et al., 2022; Suter et al., 2020; Varghese et al., 2023). For administrators, bi-shift scheduling is often perceived as positive for the institution because of the potential for cost savings due to less staffing, better continuity of care, better recruitment, and lower staff turnover (Dall'Ora et al., 2022; Varghese et al., 2023). Some nurses also see fewer commutes, and longer extended periods of rest as benefits (Suter et al., 2020). Nevertheless, there is evidence that bi-shifts can negatively impact nurses' health, including contributing to fatigue, burnout, emotional exhaustion and increased risk for medical error (Benzo et al., 2022; Kidd et al., 2023).

Thus, perception and attitudes of nurses towards bi-shift systems must be given special attention since it would directly affect job satisfaction, performance, and patient outcome. When perceptions are negative, it can lead to less efficiency, increased stress and risk of patient safety issues (Fratissier et al., 2021). Empirical research is not unanimous with some nurses feeling more satisfied with longer shifts due to continuity and flexibility, while others highlight physical strain, stress and less patient safety (Booker et al., 2024; Varghese et al., 2023). A study in intensive care reported a moderate perception of bi-shift work among nurses (69.1%) (Shehata et al., 2024), while another study showed that fatigue levels increased significantly during 12-hour shifts at night (Benzo et al., 2022; Agbonjinmi et al., 2022; Osunmakinde & Gbenga-Epebinu 2020). As a vital part of the healthcare delivery system, nurses' perception and attitude towards bi-shift systems can be used to guide policy decisions that can optimize the operations of hospitals, while maintaining the health of their employees.

This study investigated the perception and attitude of nurses toward the bi-shift system, and its perceived effect on their quality of life, in a selected hospital in Abeokuta, Ogun State, Nigeria. Two null hypotheses were tested: (H_1) there is no significant association between

nurses' years of experience and their perception of bi-shift; and (H_2) there is no significant relationship between nurses' perception and their attitude toward bi-shift.

Materials and Methods

Study design

A quantitative descriptive cross-sectional design was employed. The design permitted the systematic collection and analysis of numerical data to assess nurses' perception and attitude toward the bi-shift system and its effect on their quality of life at a single point in time.

Study setting

The study was conducted at Sacred Heart Hospital, Lantoro, Abeokuta, Ogun State, Nigeria, one of the oldest mission hospitals in the region, where nurses operate a 12-hour bi-shift duty system.

Target population

The target population comprised all nurses working at Sacred Heart Hospital, Lantoro, irrespective of cadre. The total nursing population of the hospital was 185.

Sample size determination

Because the population was known, the Taro Yamane formula was used to determine the sample size: $n = N / [1 + N(e)^2]$, where n is the required sample size, N is the population size (185), and e is the margin of error (0.05). Substitution yielded $n = 185 / [1 + 185(0.0025)] = 185 / 1.4625 \approx 126$ respondents. A 10% attrition allowance (13 respondents) was added, giving a final sample of 139 nurses.

Sampling technique

A simple random sampling technique was used to select the 139 nurses who met the eligibility criteria, ensuring that every eligible nurse had an equal chance of inclusion.

Eligibility criteria

Inclusion criteria: registered nurses holding at least a diploma in nursing, working in inpatient wards, employed for at least three months, and participating in the bi-shift system.

Exclusion criteria: registered nurses working in the outpatient department, those employed for less than three months during the study period, and nurses on annual or maternity leave.

Instrument for data collection

A self-structured questionnaire developed from literature and study objectives was used. The 39-item instrument comprised of four sections. Section A (9 items) captured socio-demographic characteristics (age, sex, ethnicity, religion, marital status, working unit, professional qualification, nursing cadre, and years of experience). Section B (8 items) assessed perception of bi-shift. Section C (8 items) assessed attitude toward bi-shift. Section D (8 items) assessed the perceived effect of bi-shift on quality of life. Sections B to D were rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Validity and reliability

Face and content validity were established by expert review; the instrument was scrutinized, modified, and corrected before administration. Reliability was assessed through a pilot test administered to 10% of the sample (10 questionnaires) among nurses at the study site. Internal consistency was computed, and a Cronbach's alpha coefficient of 0.70 or above was accepted as evidence of reliability.

Data collection procedure

An introduction letter from one of the affiliation institutions was presented to the hospital. Questionnaires were distributed to eligible nurses during shift hours with a full explanation of the study purpose and were collected immediately after completion. All 139 distributed questionnaires were retrieved, yielding a 100% response rate.

Data analysis

Completed questionnaires were examined for accuracy and completeness and analyzed using IBM SPSS Statistics version 27.0. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarized the variables. The chi-square test and Pearson's product-moment correlation were used to test the hypotheses. A p-value of 0.05 or less was considered statistically significant. Composite perception, attitude, and quality-of-life scores ranged from 8 to 40; scores at or above the respective mean were classified as positive/high and scores below the mean as negative/low.

Ethical considerations

Ethical approval was obtained from the Ethical Committee of Sacred Heart Hospital, Lantoro, Abeokuta, Ogun State, Nigeria (approval number SHH/EC/EA/04/09/25). All procedures complied with institutional standards and the 1964 Declaration of Helsinki. Participation was voluntary, informed consent was obtained from every participant, and confidentiality was assured.

Results

Data are based on responses from 139 nurses, analyzed in line with the study objectives and hypotheses. Frequency tables and a figure summarized the descriptive findings, while the chi-square test and Pearson's correlation were used for hypothesis testing at the 5% significance level (n = 139).

Table 1. Socio-demographic characteristics of the nurses (n = 139)

Variable	Category	Frequency	Percent (%)
Age (years); mean = 32.5 ± 12.0	Less than 20	3	2.2
	20–29	70	50.4
	30–39	30	21.6
	40–49	19	13.7
	50–59	12	8.6
	60 and above	5	3.6
Sex	Male	51	36.7
	Female	88	63.3
Religion	Christianity	113	81.3
	Islam	26	18.7
Ethnicity	Yoruba	72	51.8
	Igbo	53	38.1

Variable	Category	Frequency	Percent (%)
	Hausa	9	6.5
	Others	5	3.6
Marital status	Single	71	51.1
	Married	68	48.9
Department	Medical ward	56	40.3
	Surgical ward	41	29.5
	Out-patient unit	17	12.2
	Special unit	25	18.0
Professional qualification	RN (double qualified)	54	38.8
	Bachelor's degree	73	52.5
	Master's degree	12	8.6
Nursing cadre	Nursing Officer	35	25.2
	Senior Nursing Officer	56	40.3
	Principal Nursing Officer	18	12.9
	Assistant Chief Nursing Officer	18	12.9
	Chief Nursing Officer	12	8.6
Years of experience	1–5	89	64.0
	6–10	31	22.3
	More than 10	19	13.7

Note. Each variable totals 139 (100.0%). RN = Registered Nurse.

Table 1 shows that the mean age of respondents was 32.5 ± 12.0 years, with the majority (50.4%) aged 20–29 years. Most were female (63.3%) and Christian (81.3%), and slightly more than half were of Yoruba ethnicity (51.8%) and single (51.1%). Most worked in the medical ward (40.3%), held a bachelor's degree (52.5%), and were Senior Nursing Officers (40.3%). Nearly two-thirds (64.0%) had between one and five years of experience.

Table 2: Perception of the nurses toward the bi-shift system (n = 139)

Statement	SD	D	U	A	SA
Bi-shift is necessary to ensure 24-hour patient care	50 (36.0)	23 (16.5)	2 (1.4)	36 (25.9)	28 (20.1)
Bi-shift improves overall hospital service delivery	27 (19.4)	52 (37.4)	2 (1.4)	31 (22.3)	27 (19.4)
Bi-shift helps balance personal and professional work	29 (20.9)	49 (35.3)	16 (11.5)	20 (14.4)	25 (18.0)
Bi-shift is fair to all nursing	42 (30.2)	35 (25.2)	18 (12.9)	15 (10.8)	29 (20.9)

Statement	SD	D	U	A	SA
staff					
Bi-shift allows nurses enough rest between shifts	33 (23.7)	42 (30.2)	19 (13.7)	22 (15.8)	23 (16.5)
Bi-shift has a negative impact on health	51 (36.7)	35 (25.2)	14 (10.1)	26 (18.7)	13 (9.4)
Bi-shift can disrupt social life	38 (27.3)	41 (29.5)	14 (10.1)	29 (20.9)	17 (12.2)
Bi-shift is a cause of stress and burnout	39 (28.1)	37 (26.6)	17 (12.2)	26 (18.7)	20 (14.4)

Note. Values are frequency (%). SD = strongly disagree; D = disagree; U = undecided; A = agree; SA = strongly agree.

As shown in Table 2, the majority of respondents (36.0%) strongly disagreed that bi-shift is necessary to ensure 24-hour patient care, and most (37.4%) disagreed that it improves overall hospital service delivery. A further 35.3% disagreed that bi-shift helps balance personal and professional work, and 30.2% strongly disagreed that it is fair to all nursing staff. Most respondents (30.2%) disagreed that the system allows adequate rest between shifts. Notably, 36.7% strongly disagreed that bi-shift has a negative impact on health, 29.5% disagreed that it disrupts social life, and 28.1% strongly disagreed that it is a cause of stress and burnout.

Table 3: Overall perception of respondents regarding bi-shift (n = 139)

Perception level	Frequency	Percentage (%)	Mean ± SD
Negative perception	93	66.9	24.1 ± 5.7
Positive perception	46	33.1	
Total	**139**	**100.0**	

Note. Scoring: negative perception < 24.1; positive perception ≥ 24.1. Minimum score = 8; maximum score = 40.

Table 3 indicates that most nurses (66.9%) held a negative perception of the bi-shift system (mean = 24.1 ± 5.7), while about one-third (33.1%) expressed a positive perception. This distribution is illustrated in Figure 1.

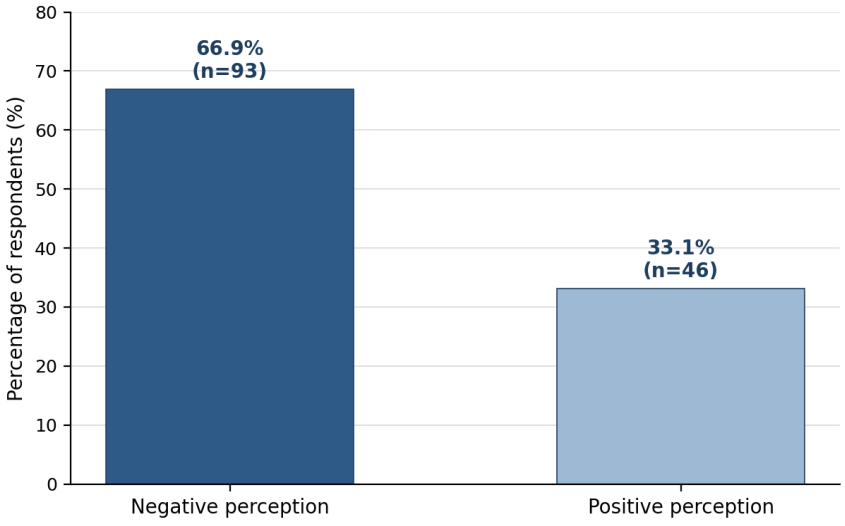


Figure 1. Overall perception of nurses toward the bi-shift system (n = 139).

Table 4: Attitude of the nurses toward the bi-shift system (n = 139)

Statement	SD	D	U	A	SA
I am willing to continue working under bi-shift	43 (30.9)	29 (20.9)	26 (18.7)	26 (18.7)	15 (10.8)
I feel motivated to perform my duties despite bi-shift	33 (23.7)	25 (18.0)	9 (6.5)	45 (32.4)	27 (19.4)
I prefer bi-shift over the traditional single-shift system	35 (25.2)	22 (15.8)	29 (20.9)	33 (23.7)	20 (14.4)
I am committed to quality care even during stressful bi-shifts	25 (18.0)	37 (26.6)	17 (12.2)	31 (22.3)	29 (20.9)
I often feel reluctant to report for duty due to bi-shift	48 (34.5)	41 (29.5)	19 (13.7)	24 (17.3)	7 (5.0)
I adjust easily to changes in bi-shift schedules	21 (15.1)	28 (20.1)	16 (11.5)	49 (35.3)	25 (18.0)
I am likely to recommend bi-shift to other nurses	33 (23.7)	33 (23.7)	42 (30.2)	20 (14.4)	11 (7.9)
Bi-shift should be reviewed and improved, not eliminated	30 (21.6)	24 (17.3)	17 (12.2)	37 (26.6)	31 (22.3)

Note. Values are frequency (%). SD = strongly disagree; D = disagree; U = undecided; A = agree; SA = strongly agree.

Table 4 shows that the largest proportion of respondents (30.9%) strongly disagreed that they were willing to continue working under bi-shift, yet most (32.4%) agreed that they remained motivated to perform their duties. Preference for bi-shift over the traditional single-shift model was limited (25.2% strongly disagreed). The majority (26.6%) disagreed that they were committed to quality care during stressful bi-shifts, while 34.5% strongly disagreed that they felt reluctant to report for duty, indicating sustained attendance despite dissatisfaction. Most respondents (35.3%) agreed that they adjusted easily to schedule changes, and although 30.2% were undecided about recommending the system, a combined 48.9% agreed or strongly agreed that bi-shift should be reviewed and improved rather than eliminated.

Table 5: Overall attitude of respondents regarding bi-shift (n = 139)

Attitude level	Frequency	Percentage (%)	Mean ± SD
Negative attitude	72	51.8	24.1 ± 7.1
Positive attitude	67	48.2	
Total	**139**	**100.0**	

Note. Scoring: negative attitude < 24.1; positive attitude ≥ 24.1. Minimum score = 8; maximum score = 40.

As presented in Table 5, slightly more than half of the nurses (51.8%) demonstrated a negative attitude toward the bi-shift system, while 48.2% demonstrated a positive attitude (mean = 24.1 ± 7.1).

Table 6: Perceived effect of bi-shift on the quality of life of nurses (n = 139)

Statement	SD	D	U	A	SA

Statement	SD	D	U	A	SA
Bi-shift affects my ability to get adequate rest and sleep	23 (16.5)	35 (25.2)	18 (12.9)	38 (27.3)	25 (18.0)
I experience frequent physical exhaustion due to bi-shift	29 (20.9)	18 (12.9)	34 (24.5)	41 (29.5)	17 (12.2)
My mental health has been negatively affected by bi-shift	30 (21.6)	34 (24.5)	26 (18.7)	27 (19.4)	22 (15.8)
Bi-shift limits time spent with family and loved ones	24 (17.3)	33 (23.7)	20 (14.4)	34 (24.5)	28 (20.1)
Bi-shift disrupts my personal and social life	26 (18.7)	17 (12.2)	21 (15.1)	37 (26.6)	38 (27.3)
I find it difficult to maintain a healthy lifestyle	28 (20.1)	31 (22.3)	24 (17.3)	34 (24.5)	22 (15.8)
My overall life satisfaction has decreased on bi-shift	22 (15.8)	33 (23.7)	35 (25.2)	25 (18.0)	24 (17.3)
Bi-shift has reduced my motivation for nursing	32 (23.0)	29 (20.9)	19 (13.7)	15 (10.8)	44 (31.7)

Note. Values are frequency (%). SD = strongly disagree; D = disagree; U = undecided; A = agree; SA = strongly agree.

Table 6 reveals that the largest proportion of nurses agreed that bi-shift affected their ability to obtain adequate rest and sleep (27.3%) and caused frequent physical exhaustion (29.5%). Regarding mental health, 24.5% disagreed that bi-shift had a negative impact. A quarter (24.5%) agreed that the system limited time with family, while the largest group (27.3%) strongly agreed that it disrupted their personal and social life, and 24.5% agreed that it made a healthy lifestyle difficult to maintain. On overall life satisfaction, the largest group (25.2%) was undecided; however, 31.7% strongly agreed that bi-shift had reduced their motivation for nursing.

Table 7: Overall perceived effect of bi-shift on respondents (n = 139)

Perceived effect level	Frequency	Percentage (%)	Mean ± SD
Low perceived effect	69	49.6	24.2 ± 8.3
High perceived effect	70	50.4	
Total	**139**	**100.0**	

Note. Scoring: low effect < 24.2; high effect ≥ 24.2. Minimum score = 8; maximum score = 40.

Table 7 shows that slightly more than half of the respondents (50.4%) reported a high perceived effect of bi-shift on their quality of life, while 49.6% reported a low perceived effect (mean = 24.2 ± 8.3).

Hypothesis testing

Hypothesis 1: There is no significant association between nurses' years of experience and their perception of bi-shift.

Table 8. Association between years of experience and perception of bi-shift

Years of experience	Negative perception, n (%)	Positive perception, n (%)	Chi-square (df; p)
1–5 years	49 (55.1)	40 (44.9)	**$\chi^2 = 17.685$** df = 2 **p < 0.001**
6–10 years	25 (80.6)	6 (19.4)	
More than 10 years	19 (100.0)	0 (0.0)	

Note. Significant at p < 0.05.

Table 8 shows a statistically significant association between years of experience and perception of bi-shift (χ^2 = 17.685, df = 2, p < 0.001). Negative perception increased with experience, from 55.1% among nurses with 1–5 years to 100.0% among those with more than 10 years. The null hypothesis was therefore rejected.

Hypothesis 2: There is no significant relationship between nurses' perception and their attitude toward bi-shift.

Table 9: Relationship between perception and attitude toward bi-shift (n = 139)

Variables	Pearson's r	p-value	Remark
Perception vs. attitude toward bi-shift	0.617	< 0.001	Significant positive relationship

Note. Pearson's product-moment correlation; significant at p < 0.05.

Table 9 demonstrates a statistically significant positive relationship between perception and attitude toward bi-shift (r = 0.617, p < 0.001). Nurses with a more positive perception were more likely to hold a positive attitude, whereas negative perceptions were associated with negative attitudes. The null hypothesis was therefore rejected.

Discussion

This study involved the perception and attitude of nurses towards bi-shift system and its perceived effect on the quality of their life at Sacred Heart Hospital, Abeokuta. The results showed that the attitude toward bi-shift was mainly negative, there was a strong relationship between experience and attitude, and between perception and attitude. These patterns contribute to an ongoing conversation about shift scheduling and worker health and well-being; this conversation is explored below about existing literature.

The respondents were mostly young (mean age 32.5 ± 12.0 years; with majority aged 20-29 years) and primarily female. This female predominance is in line with Shehata et al. (2024) and is fully representative of the ongoing perception of nursing as a women's job. Most respondents were employed in the medical ward, a finding which corresponds with Benzo et al. (2022) but differs from that of Varghese et al. (2023) who had their participants focused on surgical wards. Most were Senior Nursing Officers with a bachelor's degree with experience ranging from one to five years, compared with Suter et al. (2020) who had a much longer length of service.

In general, nurses had a negative impression of the bi-shift system. This is different from Shehata et al. (2024) which showed moderate level of perception among intensive care nurses in Egypt, which may be explained by the difference in the strength of the workforce, distribution of workload and organization policy. Low staffing levels of nurses per patient in Nigeria can exacerbate nurse-patient ratios, while higher staffing in other settings can lead to a more moderate nurse-patient ratio. A majority of respondents indicated a strong

disagreement about the need for bi-shift to provide 24-hour patient care. Unlike some of the discussions about their institutional value (Dall'Ora et al., 2022), this contrasts with the continuity of care that is claimed to apply to 12-hour shifts. In the current context, nurses might think that the continuity of care is possible by using different shift patterns without the strain, and that the lack of staffing and/or resources is more of a real problem than the shift structure itself for providing continuous quality care.

The respondents also disagreed that bi-shift is effective in delivering services in the hospital or is conducive to work–life balance. This is in alignment with Konkol et al. (2024) who found that nurses felt that there is a significant difference between day shift and night shift in their ability to do work and life oriented tasks. There could be a lot of confusion and inequity in scheduling, leading to a feeling of unfairness to all nursing staff when they hear about the idea of bi-shift. However, participants did not overwhelmingly think that bi-shift was harmful to health as Varghese et al. (2023) found, perhaps because many Nigerian nurses normalize fatigue and stress as a part of a nurse's existence.

Most of the nurses showed negative attitude towards bi-shift, which is similar to the findings by Varghese et al., (2023), who found that the nurses in Qatar had negative attitudes. Bi-shift often has an impact on physical workload and disrupts family and social obligations, and this can reduce satisfaction. The results shown that most of the respondents were not willing to work in bi-shift is similar with the result of Banakhar (2017) who found that 12-hour shift is more displeasing to the respondents. Despite this, most nurses indicated they were still motivated, consistent with Shehata et al. (2024) who found that even with an unfavorable nurse scheduling situation, nurses remained highly motivated.

There was a low level of preference for bi-shift over the traditional shift. This is in contrast to the study by Emmanuel et al. (2023) and the differences could be situational as shorter shifts could mean more frequent rotation, or a loss of financial incentive, thus affecting the value for the nurse, while in the present context a traditional shift could be valued for predictability, rest, and work–life balance. Most of them also did not agree that they were committed to delivering quality care during stressful bi-shifts, unlike the scoping review conducted by Ejebu et al. (2021); fatigue and insufficient rest during stressful times could be seen as a compromise to maintain quality care.

Half of respondents noted that bi-shift had a big impact on their life, due to the difficulty of the rosters, which affect the quality of sleep and cause physical and psychological stress. In line with Martínez-Zaragoza et al. (2020) who associated bi-shift with fatigue, mood changes and decreased well-being, and with Al Yahyaei et al. (2025) who reported higher level of fatigue in nurses working 12 or longer shifts due to lower recovery time, most nurses agreed that bi-shift impairs adequate rest and leads to frequent physical exhaustion. In contrast, Hong et al. (2021) reported that nurses with two shifts had lower chronic fatigue, higher recovery and quality of life, compared to nurses with three shifts, which could be due to differences in staffing or hospital policies. As for family and relationships, most said that bi-shift restricted family time, and this is consistent with Ose et al. (2019). Social engagement opportunities are limited with bi-shift rosters, as they may involve coming and going during the evening or at night, and the relationships that are formed can be affected by isolation, a lack of family satisfaction and a lack of social well-being, all of which have an impact on overall quality of life.

There was a significant correlation between the years of experience and the perception, and the more years of experience the greater the negative perception was. Bigger differences in views over time may be due to nurses' greater exposure to physical fatigue, family disruption, and psychological impact of long-term shift work. Also, there was a significant positive correlation between perception and attitude which means that the attitude of the nurse towards bi-shift was influenced directly by their perception of it; negative perception led to negative attitude while positive perception led to positive attitude. While this focus on perception is not an exact replication of Dall'Ora et al. (2015) who found that increased shift length was associated with increased job dissatisfaction, in this context, shift length alone did not seem to have such a strong connection with the attitude, with the perception playing a stronger role.

Limitations

The study used a quantitative, cross-sectional approach and was self-reported, in that it was at one point in time, and measured perception and attitude as a snapshot, and could not provide the in-depth lived experience that a qualitative design would. The study was carried out at one mission hospital, and the instrument was self-developed, which might also have an impact on the generalizability of the results.

Conclusion

Most of the nurses at the Sacred Heart Hospital, Abeokuta, had negative perceptions and attitudes towards the bi-shift system and reported negative impact on their quality of life especially regarding rest, social life, lifestyle and professional motivation. Perception was also found to have a positive correlation with attitude, which meant that negative perceptions significantly contributed to negative attitudes and the greater the experience, the more negative perception was. Bi-shifts are useful for operations in this context but generally have a negative effect on the nurses, suggesting the need for a review and possible redesign of the system. In detail, 66.9% of nurses felt negatively about the system, 51.8% felt negatively towards the system, and 50.4% felt that the system had a high impact on their quality of life, while only 10.8% were willing to accept the system.

Recommendations

1. Government should safeguard nurses' welfare by developing national guidelines on shift scheduling that balance service delivery with staff well-being and ensure that bi-shift systems do not compromise nurses' physical and mental health.
2. Hospitals should review existing bi-shift schedules and introduce flexible rosters, such as a three-shift system, that promote adequate rest, reduce burnout, and improve job satisfaction.
3. Nursing leaders should actively involve staff in shift planning, provide regular wellness and stress-management programmes, and establish support systems to mitigate the negative impact of bi-shift on motivation and performance.
4. Policy-makers should integrate occupational health and safety provisions that mandate regular assessment of nurses' work schedules, including monitoring of quality of life, workload, and retention in institutions operating bi-shift systems.
5. A collaborative approach involving government, administrators, and professional nursing bodies should be adopted to initiate reforms and implement evidence-based policies that protect both patient care and nurses' well-being.

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